JOURNAL OF ALLOYS AND COMPOUNDS VOLUME 205, NUMBERS 1–2, MARCH 1994

Contents

Letters

Thermodynamics of hydride formation and decomposition for $TiMn_2$–H_2 system at pressure up to 2000 atm L1
S.N. Klyamkin, V.N. Verbetsky and V.A. Demidov (Moscow, Russian Federation)

Single-crystal structure refinement of the trirutile-type compound Ga_2TeO_6 ..... L3
N. Berand and K.-J. Range (Regensburg, Germany)

Nanoscale composite $Ni_{78}Si_{10}B_{12}$ alloy: nanometer-sized Ni and Ni_3Si crystallites in the nanometer-thick amorphous matrix L7
J. Li, T.M. Wang and J. Zhao (Lanzhou, China)

Phase study of the alloy system $Cu_{1-x}Li_xInTe_2$ L11
H. Neumann, U.-C. Boehnke, G. Nolze, B. Schumann and G. Kühn (Leipzig, Germany)

Review

Magnetism in Fe-based intermetallics: relationships between local environments and local magnetic moments 1
O. Isnard and D. Fruchart (Grenoble, France)

Regular Papers

Polymorphisme et étude magnétique des fluorures ternaires de palladium (II) $PdM^{IV}F_6$ (M^{IV} = Zr, Sn, Hf) 17
N. Ruchaud, J. Grannec et A. Tressaud (Talence, France)

Crystal structure and vibrational study of mixed rubidium–caesium hydrogen sulphate $Cs_{0.1}Rb_{0.9}HSO_4$ 21
T. Mhiri, A. Daoud (Sfax, Tunisia) and P. Gravereau (Talence, France)

Nanocrystalline $MoSi_2$ phase formation induced by mechanically activated annealing 27
E. Gaffet and N. Malhouroux-Gaffet (Nantes, France)

Vaporization behavior of plutonium–zirconium binary alloy 35
A. Maeda, Y. Suzuki, Y. Okamoto and T. Ohmichi (Ibaraki-ken, Japan)

Thermodynamic investigation on $Al_{1-x}Mn_x$ melts by Knudsen cell mass spectrometry 39
R. Chastel (Marseille, France), M. Saito (Niigata, Japan) and C. Bergman (Marseille, France)

The effect of shape anisotropy on the spin reorientation in $Nd_2Fe_{14}B$ films 45
I. Panagiotopoulos, G.K. Nicolaides, V. Psycharis and D. Niarchos (Paraskevi Attikis, Greece)

Superconductivity in the La–Ru system 49
A. Palenzona, R. Eggenhöffner and F. Canepa (Genoa, Italy)

Impedance analysis of plasma-enhanced chemical-vapour-deposited TiO_2 film in 0.1 M NaOH solution near the flat-band potential 53
S.-I. Pyun, T.-H. Yang and Y.-G. Yoon (Daejon, South Korea)

Oxidation of vanadium in atomic and molecular oxygen at low pressures 59
S.A. Raspopov, A.G. Gusakov, A.G. Voropayev and A.A. Vecher (Minsk, Belarus)

Standard enthalpies of formation of Ni_3Ta, Pd_3Ta, Pt_3Nb, Pt_2V and Pt_3V by high-temperature direct synthesis calorimetry 63
Q. Guo (Guiyang, China) and O.J. Kleppa (Chicago, IL, USA)

The decomposition of monazite by mechanical milling with calcium oxide and calcium chloride 69
J.-P. Zhang and F.J. Lincoln (Nedlands, WA, Australia)

Magnetic properties of RCr_6Ge_6 compounds 77
J.H.V.J. Brabers (Amsterdam, Netherlands), K.H.J. Buschow (Eindhoven, Netherlands) and F.R. de Boer (Amsterdam, Netherlands)

Bulk growth, composition and morphology of gallium manganese antimonide – a new ternary alloy system 81
S. Basu and T. Adhikari (Kharagpur, India)

Raman effect of boron carbide ($B_{4.3}C$ to $B_{10.37}C$) 87
U. Kuhlmann and H. Werheit (Duisburg, Germany)

Elsevier Sequoia

LiIrB, CuIrB und PdIrB, ternäre Iridiumboride mit neuen, vom $CaRh_2B_2$-Typ abgeleiteten Strukturen 93
W. Klünter, B. Schmidt und W. Jung (Köln, Deutschland)

The Nd_2O_3–SrO–CuO system: compounds and phase relations 101
X. Chen, J. Liang, C. Wang, G. Rao, X. Xing, Z. Song and Z. Qiao (Beijing, China)

Synthesis, growth and investigation of the physical–chemical properties of single crystals of TmSb, TmTe and their solid solutions $TmSb_{1-x}Te_x$ 107
M.N. Abdusalyamova, A.G. Chuiko, A.Y. Golubkov, S.I. Popov, L.S. Parfenova, A.V. Procofev and I.A. Smirnov (Dushanbe, Tajikistan)

Hydrogenation behaviour of the new composite storage material Mg–x% FeTi 111
P. Mandal and O.N. Srivastava (Varanasi, India)

The α/β hydrogen miscibility gaps in hydrogenated Pd–Y–In(Sn, Pb) ternary alloys 119
F.L. Chen, Y. Kinari and Y. Sakamoto (Nagasaki, Japan)

Magnetic behaviour in UNi_4In 125
S.K. Dhar, S. Ramakrishnan, K. Ghosh, G. Chandra and R. Vijayaraghavan (Bombay, India)

Standard molar enthalpy of formation of lithium molybdates ($Li_2Mo_nO_{3n+1}$ with $n=1$, 2, 3 and 4) at 298.15 K 129
R.P. Tangri, V. Venugopal and D.K. Bose (Bombay, India)

R_3Ni alloys and their hydrogenation behavior 135
M. Au, F. Pourarian, S.G. Sankar, W.E. Wallace (Pittsburgh, PA, USA) and L. Zhang (West Lake, OH, USA)

Structural determination and magnetic properties of a new mixed valence tin chromium selenide: $Cr_2Sn_3Se_7$ 139
S. Jobic, P. Le Boterf, R. Brec and G. Ouvrard (Nantes, France)

A study of impurity effect on ordering characteristics of Fe_3Al intermetallics 147
A.O. Mekhrabov (Baku, Azerbaijan), A. Ressamoğlu and T. Öztürk (Ankara, Turkey)

Thermomechanical treatment and heat treatment of $Nd_{2.5}Fe_{13}CoC_{1.425}B_{0.075}$ bulk material 157
Ch. Hellwig (Zürich, Switzerland)

Standard enthalpies of formation of some rare earth carbides by direct synthesis calorimetry 165
S.V. Meschel and O.J. Kleppa (Chicago, IL, USA)

^{155}Gd Mössbauer effect in AlB_2-type compounds. 169
F.M. Mulder, R.C. Thiel (Leiden, Netherlands) and K.H.J. Buschow (Eindhoven, Netherlands)

A transmission electron microscopy and differential thermal analysis study of the NiZr–H system 175
R. Kronski and T. Schober (Jülich, Germany)

Ba_5Ga_6: a phase with octahedral clusters of gallium 179
M.L. Fornasini and M. Pani (Genoa, Italy)

BaPdP, Ba_2PdP_3 und $BaPd_2P_4$–Zintl-Verbindungen oder intermetallische Phasen? 183
D. Johrendt und A. Mewis (Köln, Germany)

Studies of the reaction of atomic and molecular oxygen with niobium and niobium–(1 at.% zirconium)–(0.7 at.% carbon) (PWC-11) alloy at low pressures. 191
S.A. Raspopov, A.G. Gusakov, A.G. Voropayev and A.A. Vecher (Minsk, Belarus)

Magnetothermal investigation of the kinetics of defect reaction in the FeAl intermetallic compound 199
W. Frantz, R. Lück and B. Predel (Stuttgart, Germany)

Permeability and diffusivity of hydrogen through Pd–Y–In(Sn, Pb) alloy membranes. 205
Y. Sakamoto, F.L. Chen and Y. Kinari (Nagasaki, Japan)

The kinetics of hydrogen absorption in $Zr_{1-x}Ho_xCo_2$ ($x=0.4$, 0.6 and 0.8) alloys 211
R. Ramesh, Y.V.G.S. Murti, K.V. Reddy, K.V.S. Rama Rao (Madras, India) and T.P. Das (Albany, NY, USA)

Coarsening kinetics and microstructure of Ni_3Ga precipitates in aged Ni–Ga alloys 215
J. Wimmel (Vellmar, Germany) and A.J. Ardell (Los Angeles, CA, USA)

A study of the activation behaviour of Zr–Cr–Ni–La metal hydride electrodes in alkaline solution 225
S.-R. Kim, J.-Y. Lee and H.-H. Park (Taejon, South Korea)

An investigation of the Ag–Cu–Sm (0–33.3 at.% Sm) phase diagram 231
K. Zhang, L. Chen and C. He (Kunming, China)

The structures of some rare earth basic nitrates $[Ln_6(\mu_6\text{-}O)(\mu_3\text{-}OH)_8(H_2O)_{12}(NO_3)_6](NO_3)_2{\cdot}xH_2O$, Ln = Y, Gd, Yb, x(Y, Yb) = 4; x(Gd) = 5. A novel rare earth metal cluster of the M_6X_8 type with interstitial O atom 235
Z. Žák (Brno, Czech Republic), P. Unfried and G. Giester (Vienna, Austria)

Synthesis and characterization of $(Zn,M)_2P_2O_7$ (M = Mn,Cu) 243
A. El Maadi, A. Boukhari (Rabat, Morocco), E.M. Holt (Stillwater, OK, USA) and S. Flandrois (Talence, France)

Cerium(III) luminescence and disorder in the eulytite structure 249
M.F. Hoogendorp, W.J. Schipper and G. Blasse (Utrecht, Netherlands)

Thermodynamic behaviour of complex associated ternary liquid solutions: the Pd–Pt–Ge system. 253
R. Lbibb, M. Gilbert and R. Castanet (Marseille, France)

X-ray absorption study of tetravalent Dy compounds: Cs_2RbDyF_7 and Cs_2KDyF_7. 263
Z. Hu, G. Kaindl, D. Vandré (Berlin–Dahlem, Germany), R. Hoppe (Giessen, Germany) and G. Wortmann (Paderborn, Germany)

Die Hochdruckmodifikation des RbAuTe 271
K.-J. Range, F. Rau, M. Zabel (Regensburg, Deutschland), W. Bronger, U. Kathage und G. Auffermann (Aachen, Deutschland)

Effect of filler phase porosity on directed oxidation of Al alloy 275
D.D. Upadhyaya, R. Bhat, S. Ramanathan and S.K. Roy (Bombay, India)

A new yttrium higher boride: YB_{50} 281
T. Tanaka (Ibaraki, Japan), S. Okada (Kanagawa, Japan) and Y. Ishizawa (Ibaraki, Japan)

Crystal chemistry and magnetic behaviour of the ternary compounds $RE_3(Au, Pt)_xGa_{11-x}$ (RE = Y, Gd, Tb, Dy, Ho, Er, Tm and Yb) 285
Yu. Grin, M. Ellner (Stuttgart, Germany), K. Hiebl, P. Rogl (Vienna, Austria), O.M. Sichevich and O.M. Myakush (Lviv, Ukraine)

Crystal structure of $U_2Ga_{5-x}Cu_{12}$ 291
J. Stępień-Damm, V.H. Tran, L. Shlyk and R. Troć (Wrocław, Poland)

A redetermination of the crystal structure of the $(III)_s$-polytypic form of diindium zinc tetrasulfide, $ZnIn_2S_4$ 295
N. Berand and K.-J. Range (Regensburg, Germany)

Deuterium concentration profiles in electrochemically deuterated titanium and their evolution after electrolysis 303
J.F. Fernández, F. Cuevas and C. Sánchez (Madrid, Spain)

Announcement 311

Author Index 313

Subject Index 315

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.